

List of All Chemicals

P Acinos suaveolens (Lamiaceae)

How used

Medicinal

*Unless otherwise noted all references are to Duke, James A. 1992. Handbook of phytochemical constituents of GRAS herbs and other economic plants. Boca Raton, FL. CRC Press.

| Chemical | Plant Part | Low PPM | High PPM | StdDev | *Reference |
|---|--|---------|----------|--------|---|
| 1,8-CINEOL | Shoot | -- | 3700.0 | | Jim Duke's personal files. |
| 1,8-CINEOLE | Shoot | -- | 5.0 | -0.14 | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. <i>J. Ess. Oil Res.</i> 3:191-2. |
| Activities (67) | | | | | |
| (-)Chronotropic 87 nl/ml | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. <i>Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D)</i> , 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. | | | | |
| (-)Inotropic 87 nl/ml | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. <i>Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D)</i> , 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. | | | | |
| Acaricide LC100=6 uM | | | | | |
| Allelopathic | | | | | |
| Allergenic | | | | | |
| Anesthetic | | | | | |
| Anthelmintic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. | | | | |
| Antiacyetylcholinesterase IC50=41 ug/ml | | | | | |
| Antiallergic | J. Food Hyg. Soc. Jap. 33(6): 569. | | | | |
| Antibacterial 50 ppm | | | | | |
| Antibronchitic | | | | | |
| Anticariogenic | | | | | |
| Anticatarrh | Martindale's 29th | | | | |
| Anticholinesterase IC50=50-70 | | | | | |
| Antifatigue | | | | | |
| Antihalitotic | American Health, 12(4): 17, 1993. | | | | |
| Antiinflammatory | | | | | |
| Antilaryngitic | | | | | |
| Antinociceptive | | | | | |
| Antipharyngitic | | | | | |
| Antiplaque | | | | | |
| Antirheumatic | | | | | |
| Antirhinitic | | | | | |
| Antiseptic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. | | | | |
| Antisinusitic | | | | | |
| Antispasmodic | | | | | |
| Antistaphylococcal 50 ppm | | | | | |
| Antitussive | | | | | |
| Antiulcer | | | | | |
| CNS-Stimulant | | | | | |
| Candidicide | | | | | |
| Carcinogenic | Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. <i>Compendium of Safety Data Sheets for Research and Industrial Chemicals</i> . VCH Publishers, New York. 3560-4253. | | | | |
| Choleretic | | | | | |
| Convulsant | | | | | |
| Counterirritant | Martindale's 29th | | | | |
| Cytochrome-P450-Inducer | | | | | |
| Decongestant | | | | | |
| Degranulant 0.3 ul/ml | | | | | |
| Dentifrice | Martindale's 29th | | | | |
| Edemagenic inj | | | | | |
| Expectorant | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. | | | | |
| FLavor FEMA 1-200 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | | |
| Fungicide | | | | | |

| | |
|----------------------------------|---|
| Gram(+)icide | |
| Gram(-)icide | |
| Hepatotoxic | |
| Herbicide IC50=78 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Hypotensive | |
| Inflammatory inj | |
| Insectifuge | |
| Irritant | Rinzler, C. A. 1990. The Complete Book of Herbs, Spices and Condiments. Facts on File, New York. 199 pp. |
| Myorelaxant | Newall, C.A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| Nematicide | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Neurotoxic | |
| P450-Inducer | |
| Pediculicide 2.3 x pyrethrin | |
| Perfume | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Rubefacient | Martindale's 29th |
| Secretagogue | |
| Sedative | |
| Spasmogenic | |
| Surfactant | |
| Testosterone-Hydroxylase-Inducer | |
| Transdermal | |
| Trichomonicide LD100=1,000 ug/ml | |

| | | | | |
|---|-------|----|--------|---|
| 1-HEXEN-3-OL | Shoot | -- | 7.0 | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. <i>J. Ess. Oil Res.</i> 3:191-2. |
| 2-ETHYL-CYCLOBUTANOL | Shoot | -- | 200.0 | Jim Duke's personal files. |
| 3-6-DIMETHYL-4-5-6-7-OXYGEN HETEROCYCLE-BENZO-B-FURAN | Shoot | -- | 1300.0 | Jim Duke's personal files. |
| 3-METHYL-CYCLO-PENTANONE | Shoot | -- | 300.0 | Jim Duke's personal files. |
| 3-METHYL-CYCLOHEXANONE | Shoot | -- | 1900.0 | Jim Duke's personal files. |
| ACETIC-ACID | Shoot | -- | 100.0 | Jim Duke's personal files. |

Activities (16)

| | |
|---------------------------------|--|
| Acidulant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antibacterial 5,000 ppm | |
| Antitotic | Martindale's 28th |
| Antisalmonella | |
| Antivaginitic 1-2% | |
| Expectorant | Martindale's 28th |
| Fungicide | Martindale's 29th |
| Keratitigenic | |
| Mucolytic | Martindale's 29th |
| Osteolytic | |
| Perfumery FEMA 6,000-40,000 ppm | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Protisticide | Martindale's 29th |
| Spermicide | Martindale's 28th |
| Ulcerogenic | HerbalGram No. 20, page 9. |
| Verrucolytic | |

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|--------------|-------|----|--------|-----|----------------------------|
| ALPHA-PINENE | Shoot | -- | 9500.0 | 0.8 | Jim Duke's personal files. |
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Activities (28)

| | |
|----------------------------|--|
| Allelochemical | |
| Allergenic | |
| Anti acne | |
| Antibacterial | |
| Antifeedant | |
| Antiflu | Economic & Medicinal Plant Research, 5: 195. |
| Antiinflammatory 500 mg/kg | |

| | |
|----------------------------------|--|
| Antiseptic | |
| Antispasmodic | |
| Antistaphylococcic | |
| Antiviral | Economic & Medicinal Plant Research, 5: 195. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Coleoptophile | |
| Expectorant | Michael Castleman 1991. The Healing Herbs. Rodale Press, Emmaus, PA 436 pp. |
| FLavor FEMA 15-150 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Herbicide IC50=30 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Insecticide 0.82 uM/fly | |
| Insectifuge 50 ppm | |
| Insectiphile | J. Stored. Prod. Res., 22:141, 1986. |
| Irritant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| P450-2B1-Inhibitor IC50=0.087 uM | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Sedative | Lawrence Review of Natural Products, Jun-90. |
| Spasmogenic | |
| Tranquilizer | Lawrence Review of Natural Products, Jun-90. |
| Transdermal | |

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|-----------------|-------|----|-----|-------|--|
| ALPHA-TERPINEOL | Shoot | -- | 8.0 | -0.28 | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. J. Ess. Oil Res. 3:191-2. |
|-----------------|-------|----|-----|-------|--|

Activities (23)

| | |
|---|---|
| ACE-Inhibitor 100 ug/ml (weak activity) | |
| Aldose-Reductase-Inhibitor 100 ug/ml | Okamura, K., Iwakami, S., Matsunaga, T. 1992. Biological Activity of Monoterpene from Trees. Toyama-Ken Yakuji Kenkyusho Nenpo, (20): 95-101. |
| Allelopathic | Wright,C.W.(Ed)2002.Medicinal&Aromatic Plants-Industrial Profiles. <i>Artemisia</i> 344pp.Maffei,M.(Ed)2002. <i>Vetiveria</i> .The Genus <i>Vetiveria</i> .Taylor&Francis.NY,NY.191pp.Southwell,I.,Lowe,R.(Eds)1999. <i>Tea Tree</i> .The Genus <i>Melaleuca</i> .Harwood Acad.Pub.Amsterdam,Netherlands. |
| Antiacne | |
| Antibacterial MIC=800-1,600 ug/ml | Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against <i>Streptococcus mutans</i> . J. Agric. Food Chem. 41: 1102-1105. |
| Anticancer | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY. |
| Anticariogenic MIC=800-1,600 ug/ml | Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against <i>Streptococcus mutans</i> . J. Agric. Food Chem. 41: 1102-1105. |
| Antiinflammatory | |
| Antiproliferant | |
| Antiseptic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Cicatrizant ED50=240 ug/g mus | |
| FLavor FEMA 5-40 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Insecticide 1.29 uM/fly | |
| Interleukin-6-Inhibitor | |
| Mosquitofuge > Deet | |
| Motor-Depressant | Buchbauer et al, e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC |
| Nematicide MLC=1 mg/ml | Shoyakugaku Zasshi, 44: 183. |
| Perfumery | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Pesticide | |
| Sedative | Buchbauer et al, e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC |
| Termiticide IC100=5 mg/g | |
| Transdermal | |
| Vulnary ED50=240 ug/g mus | |

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|----------|-------|----|------|------|----------------------------|
| APIGENIN | Shoot | -- | 23.3 | -1.0 | Jim Duke's personal files. |
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Activities (101)

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|------------------------|--|
| 11B-HSD-Inhibitor | |
| AntiADD | |
| AntiHIV IC72=200 ug/ml | |

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|--|--|
| Antiaflatoxin IC50=9.52 uM | |
| Antiaflatoxin IC50=2.57 ppm | |
| Antiaggregant | |
| Antiaging | |
| Antiallergic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiangiogenic 4 uM | |
| Antiarrhythmic | |
| Antibacterial | Recio, M. C., Rios, J. L., and Villar, A., A review of some antimicrobial compounds isolated from medicinal plants reported in the literature 1978-1988, <i>Phytotherapy Research</i> , 3(4), 1989, 117-125. |
| Anticancer (Lung) | |
| Anticomplementary | |
| Antidermatitic | Bisset, N.G., ed. 1994. <i>Herbal Drugs and Phytopharmaceuticals</i> . CRC Press. Boca Raton, FL. 566 pp. |
| Antiestrogenic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiherpetic 20-54 ug/ml | |
| Antihistaminic IC50=10-35 uM | |
| Antiinflammatory #NAME? | |
| Antiinflammatory IC~65=1,000 uM | |
| Antileukemic 20-50 uM | |
| Antimelanomic 1-50 uM | |
| Antimetastatic 1-50 uM | |
| Antimutagenic ID50=10-40 nM | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507. ACS, Washington 402 pp. |
| Antimutagenic ID50=0.55 ug/ml | |
| Antioxidant 1.5 x Vit. E | |
| Antioxidant IC28.5=62.5 ug/ml | |
| Antiperistaltic | |
| Antiproliferant 1-50 uM | |
| Antiproliferant IC50=155 uM | |
| Antispasmodic EC50=1-5 uM | |
| Antistress 10 mg/kg | |
| Antithyroid | Jim Duke's personal files. |
| Antitumor 1-50 uM | |
| Antitumor (Breast) 1-50 uM | |
| Antitumor (Lung) | |
| Antitumor (Skin) | |
| Antiviral 20-54 ug/ml | |
| Anxiolytic 10 mg/kg | |
| Apoptotic 12-60 uM | |
| Aromatase-Inhibitor IC65=1 uM/l | Journal of Medicinal Food 2: 235.1999. |
| Beta-Glucuronidase-Inhibitor IC50=~40 uM | |
| CNS-Depressant | |
| COX-1-Inhibitor IC65=1,000 uM | |
| COX-2-Inhibitor IC>65=1,000 uM | |
| COX-2-Inhibitor <40 uM | |
| COX-2-Inhibitor IC50=<15 uM | |
| Calcium-Antagonist? | Biochimica & Biophysica Acta, 1115: 69, 1991. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Choleretic | |
| Cyclooxygenase-Inhibitor | |
| Cytochrome-P450-1A1-Inhibitor | |
| Cytotoxic IC88=10 ug/ml | Planta Medica, 57: A113, 1991. |
| Cytotoxic 1-50 uM | |
| Cytotoxic IC50=9.5 uM | |
| DNA-Protective | |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Differentiator MIC=30 uM | |
| Differentiator IC40=40 uM | |
| Diuretic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Estrogenic EC50=0.1-25 uM/l | Journal of Medicinal Food 2: 227.1999. |

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|--|--|
| Estrogenic EC50=1 uM | |
| HIF-1alpha-Inhibitor | |
| Hyaluronidase-Inhibitor IC50+=50-250 uM | |
| Hypotensive | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| ICAM-1-Inhibitor | |
| IKK-Inhibitor | |
| Inotropic | |
| Interleukin-6-Inhibitor | |
| MAO-Inhibitor | |
| MAPK-Inhibitor | |
| Musculotropic | Wichtl, M. 1984. Teedrogen. Ein Handbuch für Apotheker und Ärzte. Wissenschaftliche Verlagsgesellschaft mbH Stuttgart. 393 pp. |
| Mutagenic | |
| Myorelaxant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| NADH-Oxidase-Inhibitor | |
| NF-kB-Inhibitor | |
| NO-Synthase-Inhibitor 5-50 uM | |
| Nodulation-Signal | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Ornithine-Decarboxylase-Inhibitor | |
| P21-Inducer 10-70 uM | |
| PKC-Inhibitor IC50=10 uM | |
| PTK-Inhibitor 10-100 uM | |
| Pesticide | |
| Polyamine-Synthesis-Inhibitor | |
| Progesterational | |
| Protein-Kinase-C-Inhibitor IC50=10-40 uM | |
| Quinone-Reductase-Inducer 20 uM | Uda, Y., Price, K. R., Williamson, G., Rhodes, M. J. C. 1997. Induction of the Anticarcinogenic Marker Enzyme, Quinone Reductase, in Murine Hepatoma Cells In Vitro by Flavonoids. <i>Cancer Lett.</i> , 120 (2): 213-216. |
| Radioprotective | |
| Sedative 30-100 mg/kg | |
| Sunscreen | |
| TNF-alpha-Inhibitor IC50=3.27 uM | |
| Topoisomerase-I-Inhibitor | Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. <i>Toxicol Ind Health</i> , 14: 223-237. |
| Topoisomerase-II-Inhibitor 50 ug/ml | Azuma, Y., Onishi, Y., Sato, Y., Kizaki, H. 1995. Effects of Protein Tyrosine Kinase Inhibitors With Different Modes of Action on Topoisomerase Activity and Death of IL-2-Dependent CTLL-2-Cells. <i>J Biochemistry</i> , 118: 312-318. |
| Topoisomerase-II-Inhibitor IC28=18 uM | |
| Topoisomerase-II-Inhibitor IC45=180 uM | |
| Uterotrophic EC50=0.1-25 uM/l | Journal of Medicinal Food 2: 227.1999. |
| VEGF-Inhibitor IC50=2-7 uM | |
| Vasodilator | |
| Xanthine-Oxidase-Inhibitor 0.36 uM | |
| iNOS-Inhibitor IC50=<15 uM | |

BENZALDEHYDE Shoot -- 200.0 0.27 Jim Duke's personal files.

Activities (24)

| | |
|---------------------|---|
| Allergenic | |
| Anesthetic | |
| Antibacterial | |
| Anticancer | |
| Antimutagenic | |
| Antipeptic | |
| Antiseptic | |
| Antispasmodic | |
| Antitumor | |
| Candidicide | |
| FLavor FEMA 150-800 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Immunostimulant | |
| Insecticide | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Insectifuge 50 | I. Stored. Prod. Res.. 22:141. 1986. |

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|------------------------------------|---|
| Motor-Depressant | Buchbauer et al, e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC |
| Narcotic | Merck 11th Edition |
| Nematicide MLC=1 mg/ml | Shoyakugaku Zasshi, 44: 183. |
| Pesticide | |
| Sedative | Buchbauer et al, e.g.Buchbauer et al,1993.Therapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC |
| Termiticide LD100=5 mg/g | |
| Tyrosinase-Inhibitor ID50=820 uM | |
| Tyrosinase-Inhibitor ID50=87 ug/ml | |
| Tyrosinase-Inhibitor ID50=0.82 mM | |
| Tyrosinase-Inhibitor ID50=830 uM | |

BETA-MYRCENE Shoot -- 2400.0 4.54 Jim Duke's personal files.

Activities (2)

| | |
|-------------------|---|
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Perfumery | Merck 11th Edition |

BETA-PINENE Shoot -- 11300.0 0.67 Jim Duke's personal files.

Activities (13)

| | |
|--------------------|--|
| Allergenic | |
| Antiinflammatory | |
| Antiseptic | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Antispasmodic | |
| Candidicide | |
| Flavor FEMA 15-600 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Herbicide | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Insectifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Irritant | Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Spasmogenic | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| Transdermal | |

BORNEOL Shoot -- 25.0 -0.37 Tumen, G. 1991. The Volatile Constituents of *Acinos suaveolens* (Sibt. et Smith). G. Don fil. Growing in Turkey. *J. Ess. Oil Res.* 3:191-2.

Activities (35)

| | |
|-------------------------------------|--|
| (-)-Chronotropic 29 ug/ml | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| (-)-Inotropic 29 ug/ml | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| Allelochemical | |
| Analgesic | |
| Antiacetylcholine | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| Antibacterial MIC=125-250 ug/ml | |
| Antibronchitic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antiescherichic MIC=125 ug/ml | |
| Antifeedant | |
| Antiinflammatory | |
| Antitoxic | |
| Antipyretic | |
| Antisalmonella MIC=125 ug/ml | |
| Antispasmodic ED50=0.008 mg/ml | |
| Antistaphylococcic MIC=250 ug/ml | |
| Antiyeast MIC=250 ug/ml | |
| CNS-Stimulant | List, P.H. and Horhammer, L. Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |

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|---------------------------|--|
| Candidicide MIC=250 ug/ml | |
| Choleretic | |
| FLavor FEMA<1 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungicide | |
| Hepatoprotective | |
| Herbicide IC50=470 mM | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Herbicide IC50=470 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Inhalant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Insect-Repellent | |
| Insectifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Irritant | Rinzler, C. A. 1990. The Complete Book of Herbs, Spices and Condiments. Facts on File, New York. 199 pp. |
| Myorelaxant | Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp. |
| Nematicide MLC=1 mg/ml | Shoyakugaku Zasshi, 44: 183. |
| Perfumery | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Pesticide | |
| Sedative | Medline (post 1990 searches filed in my computer) |
| Tranquilizer | |

CAMPHENENE Shoot -- 900.0 -0.05 Jim Duke's personal files.

Activities (9)

| | |
|----------------------|---|
| Allelopathic | Wright,C.W.(Ed)2002.Medicinal&Aromatic Plants-Industrial Profiles.Artemisia.344pp.Maffei,M.(Ed)2002.Vetiveria.The Genus Vetiveria.Taylor&Francis.NY,NY.191pp.Southwell,I.,Lowe,R.(Eds)1999.Tea Tree.The Genus Melaleuca.Harwood Acad.Pub.Amsterdam,Netherlands. |
| Antilithic? | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antioxidant | Jim Duke's personal files. |
| Expectorant | Hansel, R., Keller, K., Rimpler, H., and Schneider, G. eds. 1992. Hager's Handbuch der Pharmazeutischen Praxis, Drogen (A-D), 1209 pp., 1993 (E-O), 970 pp., 1994 (P-Z), 1196 pp. Springer-Verlag, Berlin. |
| FLavor FEMA 15-175 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Hypocholesterolemic? | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Insectifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Pesticide | |
| Spasmogenic | Fitoterapia No.59-1984. |

CARVACROL Shoot -- 15.0 -0.62 Tumen, G. 1991. The Volatile Constituents of *Acinos suaveolens* (Sibt. et Smith). G. Don fil. Growing in Turkey. *J. Ess. Oil Res.* 3:191-2.

Activities (37)

| | |
|----------------------------------|--|
| Allergenic | |
| Anesthetic | |
| Anthelmintic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antialzheimeran? | L. Gracza (1985) as cited by Buchbauer re antiacetylcholinesterase. |
| Antiatherosclerotic IC50=5.53 uM | |
| Antibacterial MIC 170-290 | Chalchat, J.C. et Garry, R.P*, Bastide, P., Fabre, F. et Malhuret, R. Correlation Composition Chimique/Activite Antimicrobienne: V - Contribution a la Comparaison de 2 Methodes de Determination Des Cm. Plantes medicinales et phytotherapie, 25: 184-193. |
| Antibacterial MIC=39-625 | Russell, G. B., Phytochemical resources for crop protection, N. Z. J. Technol., 2, 1986, 127-134. |
| Anticholinesterase? | L. Gracza (1985) as cited by Buchbauer re antiacetylcholinesterase. |
| Antidiuretic | Lawrence Review of Natural Products, Mar-92. |
| Antiinflammatory IC50=4 uM | |
| Antimelanomic IC50=120 uM/l | |
| Antioxidant | Jimenez, J., Navarro, M.C., Montilla, M.P., Martin, A. and Martinez, A. 1993. Thymus zygis Oil: Its Effects on CCl4-Induced Hepatotoxicity and Free Radical Scavenger Activity. JE05: 153-8. |
| Antioxidant (LDL) IC50=5.53 uM | |
| Antiplaque MIC=39-625 ug/ml | Osawa, K., Matsumoto, T., Maruyama, T., Takiguchi, T., Okuda, K., and Takazoe, I., Studies of the antibacterial activity of plant extracts and their constituents against periodontopathic bacteria, Bull Tokyo Dent. Coll., 31 (1), 1990, 17-21 |
| Antiprostaglandin | |
| Antiradicular 600 x thymol | Jimenez, J., Navarro, M.C., Montilla, M.P., Martin, A. and Martinez, A. 1993. Thymus zygis Oil: Its Effects on CCl4-Induced Hepatotoxicity and Free Radical Scavenger Activity. JE05: 153-8. |
| Antiseptic 1.5 x phenol | |
| Antispasmodic | |
| Antistaphylococcic | |
| Antistreptococcic | |

296pp.

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|---------------------------------|--|
| Candidicide | |
| MIC<0.1 ug/ml | |
| Candidicide 100-150 ug/ml | |
| Carminative | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Cyclooxygenase-Inhibitor #NAME? | |
| Enterorelaxant | J. Aromatherapy 4: 22. |
| Expectorant | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| FLavor FEMA 10-125 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungicide | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Insectifuge | |
| Irritant | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Nematicide MLC=1 mg/ml | |
| Pesticide | |
| Prostaglandin-Inhibitor | |
| Tracheorelaxant | |
| Trichomonicide LD100=150 ug/ml | |
| Vermifuge | |

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|---------|-------|----|-----|-------|--|
| CARVONE | Shoot | -- | 5.0 | -0.26 | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. J. Ess. Oil Res. 3:191-2. |
|---------|-------|----|-----|-------|--|

Activities (19)

| | |
|--|--|
| Allergenic | |
| Antiacetylcholinesterase IC50=1.4-1.8 mM | |
| Antiproliferative | |
| Antiseptic 1.5 x phenol | Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176) |
| CNS-Stimulant | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidstat | |
| Carminative | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. J. Pharm. Pharmacol. 46: 14-18, 1994. |
| FLavor FEMA 80-3,000 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungistat | |
| Insecticide | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Insectifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Motor-Depressant | Buchbauer et al, e.g.Buchbauer et al,1993.Theapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC |
| Nematicide MLC=1 mg/ml | Shoyakugaku Zasshi, 44: 183. |
| Perfumery | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Pesticide | |
| Sedative | Buchbauer et al, e.g.Buchbauer et al,1993.Theapeutic properties of essential oils and fragrances. Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. Bioactive Volatile Compounds from Plants. ACS Symposium Series 525. Amer. Chem. Soc., Washington DC |
| Trichomonicide LD100=300 ug/ml | |
| Vermicide | |

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|-------------|-------|----|-----|-------|----------------------------|
| CHRYSOERIOL | Shoot | -- | 6.6 | -0.74 | Jim Duke's personal files. |
|-------------|-------|----|-----|-------|----------------------------|

Activities (7)

| | |
|---------------------------------------|---|
| Aldose-Reductase-Inhibitor IC31=10 uM | Shimizu, M., Ito, T., Terashima, S., Hayashi, T., Arisawa, M., Morita, N., Kurokawa, S., Ito, K., and Hashimoto, Y. 1984. Inhibition of Lens Aldose Reductase by Flavonoids. Phytochemistry, 23: 1885-1888. |
| Anticomplementary | |
| Antimutagenic | Economic & Medicinal Plant Research, 6: 235. |
| Antioxidant | |
| Antirhinoviral | Economic & Medicinal Plant Research, 5: 197. |
| Antiviral | Economic & Medicinal Plant Research, 5: 197. |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |

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|----------|-------|----|------|--|----------------------------|
| COSMOSIN | Shoot | -- | 50.0 | | Jim Duke's personal files. |
|----------|-------|----|------|--|----------------------------|

Activities (4)

| | |
|---------------------------------------|---|
| Aldose-Reductase-Inhibitor IC40=1 uM | Shimizu, M., Ito, T., Terashima, S., Hayashi, T., Arisawa, M., Morita, N., Kurokawa, S., Ito, K., and Hashimoto, Y. 1984. Inhibition of Lens Aldose Reductase by Flavonoids. Phytochemistry, 23: 1885-1888. |
| Aldose-Reductase-Inhibitor IC99=10 uM | Shimizu, M., Ito, T., Terashima, S., Hayashi, T., Arisawa, M., Morita, N., Kurokawa, S., Ito, K., and Hashimoto, Y. 1984. Inhibition of Lens Aldose Reductase by Flavonoids. Phytochemistry, 23: 1885-1888. |

ug/ml

Candidicide MIC=500 ug/ml Planta Medica, 57: A43, 1991.

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|--|--|----|--------|---|
| CYNAROSIDE | Shoot | -- | 123.3 | Jim Duke's personal files. |
| Activities (3) | | | | |
| Aldose-Reductase-Inhibitor IC50=0.99 uM rat (strong activity) | Yoshikawa, M., et al. 1999. Medicinal Flowers. I. Aldose Reductase Inhibitors and Three New Eudesmane-Type Sesquiterpenes, Kikkanols A, B, and C, From the Flowers of Chrysanthemum indicum L. <i>Chem Pharm Bull</i> , 47(3): 340-345. | | | |
| Calcium-Antagonist IC50=1.2 uM rbt | | | | |
| Hypocholesterolemic | | | | |
| DELTA-CADINENE | Shoot | -- | 20.0 | -0.26 |
| | | | | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. <i>J. Ess. Oil Res.</i> 3:191-2. |
| Activities (9) | | | | |
| Aldose-Reductase-Inhibitor | | | | |
| Antiacne | | | | |
| Antibacterial MIC800 ug/ml | Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against <i>Streptococcus mutans</i> . <i>J. Agric. Food Chem.</i> 41: 1102-1105. | | | |
| Anticariogenic MIC800 ug/ml | Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against <i>Streptococcus mutans</i> . <i>J. Agric. Food Chem.</i> 41: 1102-1105. | | | |
| Antistreptococcic | | | | |
| Cytochrome-P450-Inducer | | | | |
| P450-Inducer | | | | |
| Pesticide | | | | |
| Testosterone-Inducer | | | | |
| DIDYMIN | Shoot | -- | 20.0 | Jim Duke's personal files. |
| EO | Shoot | -- | 6400.0 | -0.36 |
| | | | | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. <i>J. Ess. Oil Res.</i> 3:191-2. |
| GAMMA-TERPINENE | Shoot | -- | 3.0 | -0.39 |
| | | | | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. <i>J. Ess. Oil Res.</i> 3:191-2. |
| Activities (11) | | | | |
| ACE-Inhibitor 100 ug/ml (weak activity) | | | | |
| Acaricide | | | | |
| Aldose-Reductase-Inhibitor 100 ug/ml | Okamura, K., Iwakami, S., Matsunaga, T. 1992. Biological Activity of Monoterpene from Trees. <i>Toyama-Ken Yakuji Kenkyusho Nenpo</i> , (20): 95-101. | | | |
| Antiacetylcholinesterase IC23=1.2 mM | | | | |
| Antifeedant | Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin. | | | |
| Antioxidant | Jim Duke's personal files. | | | |
| FLavor FEMA 1-40 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | |
| Insectifuge | Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. <i>Hager's Handbuch der Pharmazeutischen Praxis</i> , Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin. | | | |
| Irritant | Zebovitz, T. C. Ed. 1989. Part VII. <i>Flavor and Fragrance Substances</i> , in Keith L. H. and Walters, D.B., eds. <i>Compendium of Safety Data Sheets for Research and Industrial Chemicals</i> . VCH Publishers, New York. 3560-4253. | | | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | |
| Pesticide | | | | |
| GERANIAL | Shoot | -- | 50.0 | -0.49 |
| | | | | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. <i>J. Ess. Oil Res.</i> 3:191-2. |
| Activities (13) | | | | |
| AntiEBV IC50=16 uM | | | | |
| Antiaflatoxin | | | | |
| Antibacterial | Onawunmi, G.O., Yisak, W-A., Ogunlana,* E.O. 1984. Antibacterial Constituents In The Essential Oil Of <i>Cymbopogon citratus</i> (DC.) Stapf. <i>Journal of Ethnopharmacology</i> , 12: 279-286, 1984. | | | |
| Antitumor (Colon) | | | | |
| Antitumor (Skin) | | | | |
| Antiviral IC50=16 uM | | | | |
| Antiyeast | | | | |
| Chemopreventive | | | | |
| Estrogenic | | | | |
| Fungicide | | | | |
| Glutathionigenic | | | | |
| Pesticide | | | | |

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|---|--|--------|---------|--|
| HESPERIDIN | Shoot | -- | 1993.3 | Jim Duke's personal files. |
| Activities (31) | | | | |
| Analgesic | | | | |
| Anti-LDL | | | | |
| AntiDNA | | | | |
| AntiRNA | | | | |
| Antiallergenic | Yakugaku Zasshi, 111: 193, 1991. | | | |
| Antibradykinic | Economic & Medicinal Plant Research, 5: 366. | | | |
| Anticapillary-Fragility | | | | |
| Antiflu | Economic & Medicinal Plant Research, 5: 197. | | | |
| Antihistaminic | | | | |
| Antiinflammatory IC47=50 mg/kg scu | Da Silva Emim, J.A., Oliveira, A.B. and Lapa, A.J. Pharmacological Evaluation of the Anti-inflammatory Activity of a Citrus Bioflavonoid, Hesperidin, and the Isoflavonoids, Duartin and Claussequinone, in Rats and Mice. <i>J. Pharm. Pharmacol.</i> 46:118-122,1994 | | | |
| Antiinflammatory IC63=100 mg/kg scu | Da Silva Emim, J.A., Oliveira, A.B. and Lapa, A.J. Pharmacological Evaluation of the Anti-inflammatory Activity of a Citrus Bioflavonoid, Hesperidin, and the Isoflavonoids, Duartin and Claussequinone, in Rats and Mice. <i>J. Pharm. Pharmacol.</i> 46:118-122,1994 | | | |
| Antileukotriene | | | | |
| Antioxidant IC50=8 ppm | Phytochemistry, 37: 1463. | | | |
| Antiprostaglandin | | | | |
| Antistomatisic | | | | |
| Antitriglyceride | | | | |
| Antiuclcer 100-150 mg/kg ipr | | | | |
| Antivaccinia | Economic & Medicinal Plant Research, 5: 197. | | | |
| Antiviral | Vlietinck, A.J. and Dommisse, R.A. eds. 1985. Advances in Medicinal Plant Research. Wiss. Verlag. Stuttgart. | | | |
| Anxiolytic | | | | |
| CNS-Depressant 100-150 mg/kg ipr | | | | |
| Calcium-Antagonist IC50=1.2 uM rbt | | | | |
| Capillariprotective | Martindale's 29th | | | |
| Catabolic | | | | |
| Choleretic | | | | |
| Cyclooxygenase-Inhibitor | | | | |
| Hypolipidemic | | | | |
| Lipoxygenase-Inhibitor | | | | |
| Pesticide | | | | |
| ProHDL | | | | |
| Vasopressor | | | | |
| HEX-1-EN-3-OL | Shoot | -- | 700.0 | Jim Duke's personal files. |
| ISOMENTHONE | Shoot | 1090.0 | 3255.0 | 0.05 Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. <i>J. Ess. Oil Res.</i> 3:191-2. |
| Activities (3) | | | | |
| Antiacetylcholinesterase IC50=1.6 mM | | | | |
| Antioxidant | | | | |
| Antiradicular | | | | |
| ISOMENTHONE | Essential Oil | -- | -- | Jim Duke's personal files. |
| Activities (3) | | | | |
| Antiacetylcholinesterase IC50=1.6 mM | | | | |
| Antioxidant | | | | |
| Antiradicular | | | | |
| ISOPIPERITONE | Shoot | -- | 2800.0 | 1.0 Jim Duke's personal files. |
| ISOPULEGONE-I | Shoot | -- | 3800.0 | Jim Duke's personal files. |
| ISOPULEGONE-II | Shoot | -- | 10100.0 | Jim Duke's personal files. |
| ISOQUERCITRIN | Shoot | -- | 430.0 | 0.43 Jim Duke's personal files. |
| Activities (22) | | | | |
| ACE-Inhibitor ID50=300 ug/ml rat (24 hr.) | | | | |

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| | /51 pp. |
| Antibacterial | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Anticancer | |
| Antielastase IC50=0.7 ug/ml | |
| Antifeedant | Russell, G. B., Phytochemical resources for crop protection, N. Z. J. Technol., 2, 1986, 127-134. |
| Antiinflammatory | |
| Antinociceptive | |
| Antioxidant 1/4 quercetin | |
| Antioxidant IC50=9.0 uM | |
| Antiradicular 1/4 quercetin | |
| Antitumor | |
| Antitumor-Promoter | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Capillarigenic | |
| Diaphoretic | |
| Diuretic 10 ppm | List, P.H. and Horhammer, L., Hager's Handbuch der Pharmazeutischen Praxis, Vols. 2-6, Springer-Verlag, Berlin, 1969-1979. |
| Hypotensive | Uchida, U., Ohta, H., Niwa, M., Mori, A., Nonaka, G-i., Nishioka, I., and Zaki, M. 1989. Prolongation of Life Span of Stroke-Prone Spontaneously Hypertensive Rats (SHRSP) Ingesting Persimmon Tannin. <i>Chem. Pharm. Bull.</i> 38(4): 1049-1052, 1990. |
| Insectiphile | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Pesticide | |
| TNF-alpha-Inhibitor | |
| Topoisomerase-II-Inhibitor 550 ug/ml | Bernard, F. X., Sable, S., Cameron, B., Provost, J., Desnottes, J. F., Crouzet, J., Blanche, F. 1997. Glycosylated Flavones as Selective Inhibitors of Topoisomerase IV. <i>Antimicrobial Agents & Chemotherapy</i> , 41: 992-998. |

KAEMPFEROL Shoot -- 16.6 -0.61 Jim Duke's personal files.

Activities (75)

| | |
|---|---|
| 11B-HSD-Inhibitor | |
| 5-Lipoxygenase-Inhibitor IC50 (uM)=20 | |
| Aldose-Reductase-Inhibitor 100 uM | Oliveira, T. T., Nagem, T.J., Miranda, L. C. G., Paula, V. F., Teixeira, M. A. 1997. Inhibitory Action on Aldose Reductase by Soybean Flavonoids. <i>J Braz Chem Soc</i> , 8(3): 211-213. |
| Antiaflatoxin IC50=8.73 uM | |
| Antiaflatoxin IC50=3.28 ppm | |
| Antiaggregant 30 uM | |
| Antiallergic | |
| Antibacterial 20 ug/ml | |
| Anticancer | |
| Antifertility 250 mg/kg/day/60 days/orl rat | Kumar, P., Dixit*, V.P., and Khanna, P. Antifertility Studies of Kaempferol: Isolation and Identification from Tissue Culture of some Medicinally Important Plant Species. <i>Plantes medicinales et phytotherapie</i> , 23: 193-201, 1989. |
| Antigingivitic 20 ug/ml | |
| Antiherpetic 23-92 ug/ml | Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. <i>J. of Natural Products</i> 55(12):1732-1740, 1992. |
| Antihistaminic | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antiimplantation | |
| Antiinflammatory 20 mg/kg | |
| Antiinflammatory 200 mg/kg ipr rat | |
| Antileukemic IC50=3.1 ug/ml | Life Sciences 55: 1061. |
| Antilymphocytic | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| Antimutagenic ID50=10-40 nM | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antioxidant IC50=40 uM | |
| Antioxidant 3/4 quercetin | |
| Antioxidant IC50=1.2 ug/ml | |
| Antiperiodontic 20 ug/ml | |
| Antiplaque 20 ug/ml | |
| Antiradicular 7 x quercetin | |
| Antiseptic 20 ug/ml | |
| Antiserotonin 200 mg/kg ipr rat | |
| Antispasmodic | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antistaphylococcic | |

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| Antitumor-Promoter | Yasukawa, K., Takido, M., Takeuchi, M., Sato, Y., Nitta, K., and Nakagawa, S. 1989. Inhibitory Effects of Flavonol Glycosides on 12-O-Tetradecanoylphorbol-13-acetate-Induced Tumor Promotion. <i>Chem. Pharm. Bull.</i> 38(3): 774-776, 1990. |
| Antiulcer 50-200 mg/kg ipr rat | |
| Antiviral 23-92 ug/ml | |
| Apoptotic 60 uM | |
| Aromatase-Inhibitor IC12=1 uM/l | Journal of Medicinal Food 2: 235.1999. |
| COX-2-Inhibitor | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Carcinogenic | Hutchings, A, Scott, AH, Lewis, G, and Cunningham, A. 1996. Zulu Medicinal Plants. An inventory. University of Natal Press, Pietermaritzburg. 450 pp. |
| Choleretic | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Copper-Chelator | |
| Cyclooxygenase-Inhibitor IC50 (uM) =20 | |
| Cytotoxic | |
| Diaphoretic? | Lawrence Review of Natural Products, Dec-90. |
| Diuretic | |
| Estrogenic EC50=0.1-25 uM/l | Journal of Medicinal Food 2: 227.1999. |
| Estrogenic EC50=0.56 uM | |
| Fungicide 20 ug/ml | Father Nature's Farmacy: The aggregate of all these three-letter citations. |
| HIV-RT-Inhibitor IC50=50-150 ug/ml | Garcia, J., Morin,* C., Nyasse, B., Sondengam, B-L., Tchouankeu, J-C., and Tsamo, E. Complete Structural Assignments Of An Ergosterol Derivative From Eritandrophragma utile. <i>Journal of Natural Products</i> , 54(1): 136-142, 1991. |
| Hepatoprotective IC50=5.46 uM | |
| Hepatoprotective IC50=1.30 ppm | |
| Hypotensive | |
| ICAM-1-Inhibitor | |
| Inotropic | |
| Iodothyronine-Deiodinase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| JNK-Inhibitor | |
| Lipoxygenase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| MAO-Inhibitor | |
| Mutagenic | |
| NO-Inhibitor IC50=13.9 uM | |
| Natriuretic | |
| Neuroprotective | |
| PAF-Inhibitor | |
| Pesticide | |
| Protisticide | Meckes, M., Calzada, F., Tapia-Contreras, A., Cedillo-Rivera, R. 1999. Antiprotozoal Properties of <i>Helianthemum glomeratum</i> . <i>Phytotherapy Research</i> , 13(2): 102-105. |
| Quinone-Reductase-Inducer 3 uM | |
| TNF-alpha-Inhibitor IC50=3.99 uM | |
| Teratologic | |
| Topoisomerase-I-Inhibitor | Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. <i>Toxicol Ind Health</i> , 14: 223-237. |
| Topoisomerase-II-Inhibitor IC50=8.1 ug/ml | Constantinou, A., Mehta, R., Runyan, C., Rao, K., Vaughan, A., Moon, R. 1995. Flavonoids as DNA Topoisomerase Antagonists and Poisons: Structure-Activity Relationships. <i>J Natural Products</i> , 58: 217-225. |
| Tyrosinase-Inhibitor ID50=230 uM | |
| Uterotrophic EC50=0.1-25 uM/l | Journal of Medicinal Food 2: 227.1999. |
| Vasodilator | |
| cAMP-Phosphodiesterase-Inhibitor | |
| iNOS-Inhibitor IC50=<15 uM | |
| iNOS-Inhibitor IC50=13.9 uM | |

LIMONENE Shoot -- 3700.0 1.56 Jim Duke's personal files.

Activities (60)

| | |
|--------------------------|--|
| AChE-Inhibitor | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. |
| Acaricide LC100=8 uM | |
| Allelochemical | |
| Allergenic 1/20th carene | |

| | |
|---|--|
| Antiadrenomimetic | |
| Antialzheimeran? | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. |
| Antiasthmatic | |
| Antibacterial | Revista Itiliana Eppos, 12: 5, 1994. |
| Anticancer | |
| Antiesophagitic | |
| Antifeedant | |
| Antiflu | Economic & Medicinal Plant Research, 5: 195. |
| Antiinflammatory | |
| Antilithic | |
| Antilymphomtic | |
| Antimetastatic (Stomach) | |
| Antimutagenic | Economic & Medicinal Plant Research, 6: 235. |
| Antioesity | |
| Antiseptic | |
| Antispasmodic ED50=0.197 mg/ml | Fitoterapia No.59-1984. |
| Antitumor | |
| Antitumor (Breast) | |
| Antitumor (Colon) | |
| Antitumor (Pancreas) | |
| Antitumor (Prostate) | |
| Antitumor (Stomach) | |
| Antiviral | |
| Apoptotic | |
| Bronchoprotectant | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidistat | |
| Chemopreventive | |
| Cholesterolytic | |
| Detoxicant | |
| Enterococontractant | J. Aromatherapy 4: 22. |
| Expectorant | |
| FLavor | |
| Fungiphilic | J. Agric. Food Chem. 43: 2283. |
| Fungistat | |
| GST-Inducer | |
| Herbicide IC50=45 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Histaminic | |
| Immunomodulator | |
| Insecticide 0.37 uM/fly | |
| Insectifuge | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Interleukin-6-Inhibitor | |
| Irritant | |
| Lipolytic | |
| Myorelaxant 50 mg/kg | |
| NO-Genic | |
| Nematicide IC=100 ug/ml | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Ornithine-Decarboxylase-Inhibitor ~750 mg/kg (diet) | |
| Ozone-Scavenger | |
| P450-Inducer | |
| Peristaltic | |
| Pesticide | |
| Photosensitizer | Rinzler, C. A. 1990. The Complete Book of Herbs, Spices and Condiments. Facts on File, New York. 199 pp. |
| Sedative ED=1-32 mg/kg | Wagner & Wolff, eds. 1977. New Natural Products (RS164.156.176) |
| Transdermal | |

LINALOOL Shoot -- 1800.0 -0.15 Jim Duke's personal files.

Activities (53)

Acaricide C90=<15 ul/l
(<15 ppm)
Allergenic
Analgesic
Anesthetic 0.01-1 ug/ml
Antiacyetylcholinesterase

| | |
|---|---|
| Antianaphylactic | |
| Antibacterial MIC=1,600 ug/ml | Muroi, H. and Kubo, I. 1993. Combination Effects of Antibacterial Compounds in Green Tea Flavor against <i>Streptococcus mutans</i> . <i>J. Agric. Food Chem.</i> 41: 1102-1105. |
| Anticariogenic MIC=1,600 ug/ml | |
| Anticolic | |
| Anticonvulsant 200 mg/kg ipr mus | |
| Antiedemic | |
| Antiglutamaergic | |
| Antihistaminic | Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp. |
| Antiinflammatory | |
| Antileukemic IC50=3.5-4.2 ug/ml | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antilymphomeric IC50=3.5-4.2 ug/ml | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antimange | |
| Antimite | |
| Antimutagenic | |
| Antiseptic 5 x phenol | Wagner & Wolff, eds. 1977. <i>New Natural Products</i> (RS164. I56. 176) |
| Antishock | Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp. |
| Antispasmodic | Buchbauer, G., Jirovetz*, L., Nikiforov, A., Remberg, G., Raverdino, V. 1989. Headspace-Analysis and Aroma Compounds of Austrian Hay-Blossoms (<i>Flores Graminis</i> , <i>Graminis Flos</i>) used in Aromatherapy. <i>J. Ess. Oil Res.</i> , 2: 185-191, 1990. |
| Antiviral | |
| Barbituate-Synergist | |
| Bronchorelaxant | Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp. |
| CNS-Depressant | |
| Cancer-Preventive | Stitt, P. A. <i>Why George Should Eat Broccoli</i> . Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidstat | |
| Carminative | |
| Culicide LC50=156-194 mg/l | |
| Cytotoxic | |
| Expectorant | Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp. |
| FLavor FEMA 2-40 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungicide | Acta Botanica Sinica, 32: 49. |
| GABA-nergic | |
| Hypnotic | |
| Hypothermic | |
| Insecticide LC50=156-194 mg/l | |
| Insectifuge | Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Irritant | Zebowitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. <i>Compendium of Safety Data Sheets for Research and Industrial Chemicals</i> . VCH Publishers, New York. 3560-4253. |
| Larvicide LC50=156-194 mg/l | |
| Mosquitofuge > Deet | |
| Motor-Depressant | Buchbauer et al, e.g.Buchbauer et al,1993.The therapeutic properties of essential oils and fragrances, Chap.12 in Teranishi,R, Buttery,R.G and Sugisawa,H. Eds. <i>Bioactive Volatile Compounds from Plants</i> . ACS Symposium Series 525. Amer. Chem. Soc., Washington DC |
| Nematicide MLC=1 mg/ml | Shoyakugaku Zasshi, 44: 183. |
| Perfumery | Merck 11th Edition |
| Pesticide | |
| Prooxidant | Charalambous, G. (Ed.). 1994. <i>Spices, Herbs and Edible Fungi</i> . Elsevier Science B. V. Amsterdam. 764 pp. |
| Sedative ED=1-32 mg/kg | Wagner & Wolff, eds. 1977. <i>New Natural Products</i> (RS164. I56. 176) |
| Sedative 200 mg/kg ipr mus (1% as active as diazepam) | |
| Termitifuge | Jacobson, M., <i>Glossary of Plant-Derived Insect Deterrents</i> , CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Trichomonicide LD100=600 ug/ml | |
| Tumor-Promoter | |

LUTEOLIN Shoot -- 66.6 1.41 Jim Duke's personal files.

Activities (78)

| | |
|---|--|
| Aldose-Reductase-Inhibitor EC=3 ppm | Shin*, K.H., Chung, M.S., Chae, Y.J., Yoon, K.Y., Cho, T.S. 1992. A survey for aldose reductase inhibition of herbal medicines. <i>Fitoterapia</i> 64(2): 130, 1993. |
| Aldose-Reductase-Inhibitor IC50=0.45 uM rat | |
| AntiHIV | |
| Antiallergic | |
| Antiangiogenic IC60-75=10 uM | |
| Antiatherogenic | |
| Antibacterial MIC=500 ug/ml | Planta Medica, 57: A43, 1991. |

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|--|--|
| Anticarcinomic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Anticataract EC=3 ppm | Shin*, K.H., Chung, M.S., Chae, Y.J., Yoon, K.Y., Cho, T.S. 1992. A survey for aldose reductase inhibition of herbal medicines. <i>Fitoterapia</i> 64(2): 130, 1993. |
| Anticomplementary | |
| Antidermotic | Bisset, N.G., ed. 1994. <i>Herbal Drugs and Phytopharmaceuticals</i> . CRC Press. Boca Raton, FL. 566 pp. |
| Antiestrogenic | |
| Antifeedant IC52=<1,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Antiherpetic 11-23 ug/ml | |
| Antihistaminic <10-15 uM | |
| Antiinflammatory #NAME? | Wichtl, M. 1984. <i>Teedrogen. Ein Handbuch fur Apotheker und Arzte</i> . Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp. |
| Antileukemic 20-50 uM | |
| Antilymphomeric | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antimelanomic | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antimutagenic ID50=2-5 nM | |
| Antimutagenic ID50=0.44 ug/ml | |
| Antinociceptive | |
| Antioxidant IC50=10 uM | |
| Antipolio | Economic & Medicinal Plant Research, 5: 197. |
| Antiproliferant | |
| Antispasmodic | Williamson, E. M. and Evans, F. J., <i>Potter's New Cyclopaedia of Botanical Drugs and Preparations</i> , Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antitumor 1-50 uM | |
| Antitumor (Colon) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Kidney) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Lung) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Ovary) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Pancreas) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Skin) 20 uM | |
| Antitumor (Stomach) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitumor (Thyroid) 12-50 uM | |
| Antitumor (brain) | Chiang, L. C., Chiang, W., Chang, M. Y., Ng, L. T., Lin, C. C. 2003. Antileukemic activity of selected natural products in Taiwan. <i>Am J Chin Med</i> , 31(1):37-46. |
| Antitussive | |
| Antiviral 11-23 ug/ml | |
| Aphidifuge | |
| Apoptotic 12-50 uM | |
| Aromatase-Inhibitor IC35=1 uM/l | Journal of Medicinal Food 2: 235.1999. |
| Beta-Glucuronidase-Inhibitor IC50=~40 uM | |
| Calcium-Antagonist IC50=1.2 uM fbt | |
| Cancer-Preventive | |
| Chemopreventive | |
| Choleretic | |
| Cytotoxic 1-50 uM | |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Differentiator IC>40=40 uM | |
| Diuretic | Jim Duke's personal files. |
| Estrogenic 58% genistein | |
| Hepatoprotective | |
| Hyaluronidase-Inhibitor IC50+=100-250 uM | |
| Hypocholesterolemic | |
| ICAM-1-Inhibitor | |
| IKK-Inhibitor | |
| Iodothyronine-Deiodinase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Lipoxygenase-Inhibitor | |
| MAPK-Inhibitor | |
| MMP-9-Inhibitor 20 uM | |
| Metalloproteinase-Inhibitor | |
| Myorelaxant | |

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|--|---|
| NF-kB-Inhibitor | |
| NO-Inhibitor | |
| PTK-Inhibitor 10-100 uM | |
| Pesticide | |
| Proliferant | |
| Prostaglandin-Synthetase-Inhibitor | |
| Protein-Kinase-C-Inhibitor IC50=50 uM | |
| Succinoxidase-Inhibitor | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. |
| TNF-alpha-Inhibitor IC50=14.44 uM | |
| Topoisomerase-I-Inhibitor | Santti, R., Makela, S., Strauss, L., Korman, J., Kostian, M. L. 1998. Phytoestrogens: Potential Endocrine Disruptors in Males. <i>Toxicol Ind Health</i> , 14: 223-237. |
| VEGF-Inhibitor IC50=2-7 uM | |
| Vasodilator | |
| Xanthine-Oxidase-Inhibitor IC50=0.11 ug/ml | Chem. & Pharm. Bull. 38: 1772. |
| iNOS-Inhibitor | |

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|-------------------------|-------|----|------|---|
| LUTEOLIN-7-O-RUTINOSIDE | Shoot | -- | 20.0 | Jim Duke's personal files. |
| MENTHOL | Shoot | -- | 3.0 | -0.64 Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. <i>J. Ess. Oil Res.</i> 3:191-2. |

Activities (63)

| | |
|---------------------------------------|--|
| Allergenic | Martindale's 29th |
| Analgesic | Martindale's 28th |
| Anesthetic 2,000 ppm | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994. |
| Antiacyetylcholinesterase IC50=2.0 mM | |
| Antiaggregate IC50=750 | |
| Antiallergic | J. Food Hyg. Soc. Jap. 33(6): 569. |
| Antiasthmatic | Mills, Simon and Bone, Kerry. 2000. <i>Phytotherapy</i> . Churchill Livingston, Edinburgh. |
| Antibacillus MIC=1.25 mg/ml | |
| Antibacterial MIC=0.625-2.5 | |
| Antibronchitic | Martindale's 28th |
| Antidandruff | A.L.L. Hunting. <i>Encyclopedia of Shampoo Ingredients</i> . Micelle Press, Cranford NJ. 467 pp. |
| Antiescherichic MIC=1.25 mg/ml | |
| Antihalitotic | American Health, 12(4): 17, 1993. |
| Antihistaminic | J. Food Hyg. Soc. Jap. 33(6): 569. |
| Antiinflammatory | Martindale's 28th |
| Antilisteria MIC=0.625 mg/ml | |
| Antineuragic | |
| Antiodontalgic | Martindale's 28th |
| Antipruritic | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994. |
| Antipyretic | |
| Antirheumatic | Martindale's 28th |
| Antisalmonella MIC=0.625 mg/ml | |
| Antiseptic 4 x phenol | Wagner & Wolff, eds. 1977. <i>New Natural Products</i> (RS164. I56. 176) |
| Antisinusitic | Martindale's 28th |
| Antispasmodic ED50=0.01 mg/ml | Fitoterapia No.59-1984. |
| Antistaphylococccic MIC=0.625 mg/ml | |
| Antistreptococccic MIC=0.4 mg/ml | |
| Antitartar | |
| Antivaginitic | |
| Antivulvitic | |
| Bradycardic 65 mg/3 x day/woman | Martindale's 28th |
| Bronchomucolytic | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 200. |
| Bronchomucotropic | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994. |
| Bronchorheic | Advance in Chinese Medicinal Materials Research. 1985. Eds. H. M. Chang, H. W. Yeung, W. -W. Tso and A. Koo. World Scientific Publishing Co., Philadelphia Pa., page 200. |
| CNS-Depressant | |

| | |
|-----------------------------------|--|
| Calcium-Antagonist | |
| Candidicide MIC=0.625 mg/ml | |
| Carminative | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994. |
| Choleretic | |
| Ciliotoxic | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994. |
| Congestant | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994. |
| Convulsant | R.J. Huxtable (Huxtable, R.J. (as T. Max), 1992. This and That: The Essential Pharmacology of Herbs and Spices. Tips 13:15-20 Huxtable, R.J. 1992b. The Myth of Benign Nature. The Risk of Herbal Preparations. <i>Anns. Intern. Med.</i> 117(2):165-6; Huxtable, R. |
| Counterirritant | |
| Decongestant? 11 mg/man | Eccles, R., et al. 1989. The effects of oral administration of (-)-menthol on nasal resistance to airflow and nasal sensation of airflow in subjects suffering from nasal congestion associated with the common cold. <i>J. Pharm. Pharmacol.</i> 42: 652-654, 1990. |
| Dermatitigenic | |
| Diaphoretic | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| Enterorelaxant | J. Aromatherapy 4: 22. |
| Expectorant | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994. |
| Gastrosedative | Merck 11th Edition |
| Irritant | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994. |
| Myorelaxant | Martindale's 29th |
| Nematicide MLC=1 mg/ml | Shoyakugaku Zasshi, 44: 183. |
| Neurodepressant | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994. |
| Neuropathogenic 40-100 mg/day/rat | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994. |
| Nociceptive | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994. |
| Perfumery | Merck 11th Edition |
| Pesticide | |
| Refrigerant | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. <i>J. Pharm. Pharmacol.</i> 46: 14-18, 1994. |
| Rubefacient | |
| Termiticide | Jacobson, M., Glossary of Plant-Derived Insect Deterrents, CRC Press, Inc., Boca Raton, FL, 213 p, 1990. |
| Transdermal | |
| Vibriocide | |

MENTHONE Shoot -- 13600.0 1.49 Jim Duke's personal files.

Activities (30)

| | |
|--|---|
| Acaricide | |
| Allelopathic | |
| Analgesic | |
| Antiacyetylcholinesterase IC50=1.4 mM | |
| Antiaggregant IC50=750 | |
| Antiallergic | J. Food Hyg. Soc. Jap. 33(6): 569. |
| Antibacillary MIC=1.25 mg/ml | |
| Antibacterial MIC=0.625-5 mg/ml | |
| Antiescherichic MIC=5 mg/ml | |
| Antihistaminic | J. Food Hyg. Soc. Jap. 33(6): 569. |
| Antilisteria MIC=1.25 mg/ml | |
| Antisalmonella MIC=5 mg/ml | |
| Antiseptic 2.25 x phenol | Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176) |
| Antispasmodic ED50=0.044 mg/ml | Fitoterapia No.59-1984. |
| Antistaphylococcic MIC=0.625-2.5 mg/ml | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide MIC=2.5 mg/ml | |
| Cerebrotoxic orl man | J. Aromatherapy 4: 24. |
| Culicide LC50=156-194 mg/l | |
| FLavor FEMA 5-50 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungicide | |
| Insecticide LC50=156-194 mg/l | |
| Larvicide LC50=156-194 mg/l | |

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|--------------------------------|--|--|--|--|
| Nematicide MLC=1 mg/ml | Shoyakugaku Zasshi, 44: 183. | | | |
| Perfumery | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | |
| Pesticide | | | | |
| Psychoactive | | | | |
| Sedative | Ortiz de Urbina, A.V., Martin*, M.L., Montero, M.J., Moran, A., and San Roman, L. 1988. Sedating and Antipyretic Activity of the Essential Oil of <i>Calamintha sylvatica</i> subsp. <i>Ascendens</i> . <i>Journal of Ethnopharmacology</i> , 25: 165-171, 1989. | | | |
| Trichomonicide LD100=600 ug/ml | | | | |

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|---------------|-------|----|-------|----------------------------|
| METHYLBENZENE | Shoot | -- | 300.0 | Jim Duke's personal files. |
| MYRCENE | Shoot | -- | 15.0 | -0.33 |

Activities (22)

| | | | | |
|--------------------------------------|--|--|--|--|
| ACE-Inhibitor 100 ug/ml | | | | |
| Aldose-Reductase-Inhibitor 100 ug/ml | Okamura, K., Iwakami, S., Matsunaga, T. 1992. Biological Activity of Monoterpenes from Trees. <i>Toyama-Ken Yakuji Kenkyusho Nenpo</i> , (20): 95-101. | | | |
| Allergenic | | | | |
| Analgesic | Kauderer, B., Zamith, H., Paumgartten, F.J.R., and Speit, G. Evaluation of the Mutagenicity of B-Myrcene in Mammalian Cells In Vitro. <i>Environmental and Molecular Mutagenesis</i> 18: 28-34, 1991. | | | |
| Antibacterial | | | | |
| Anticonvulsant | | | | |
| Antimutagenic | Kauderer, B., Zamith, H., Paumgartten, F.J.R., and Speit, G. Evaluation of the Mutagenicity of B-Myrcene in Mammalian Cells In Vitro. <i>Environmental and Molecular Mutagenesis</i> 18: 28-34, 1991. | | | |
| Antinitrosaminic | | | | |
| Antinociceptive 10-20 mg/kg ipr mus | Rao, V.S.N., Menezes, A.M.S., Viana, G.S.B. 1990. Effect of myrcene on nociception in mice. <i>J. Pharm. Pharmacol.</i> 42: 877-878, 1990. | | | |
| Antinociceptive 20-40 mg/kg scu mus | Rao, V.S.N., Menezes, A.M.S., Viana, G.S.B. 1990. Effect of myrcene on nociception in mice. <i>J. Pharm. Pharmacol.</i> 42: 877-878, 1990. | | | |
| Antioxidant | Jim Duke's personal files. | | | |
| Antispasmodic | Jim Duke's personal files. | | | |
| Chemopreventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. | | | |
| FLavor FEMA 0.5-9 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | |
| Fungicide | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. | | | |
| Hypothermic | | | | |
| Insectifuge | | | | |
| Irritant | Zebowitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. | | | |
| Myorelaxant 100-200 mg/kg | | | | |
| P450-2B1-Inhibitor IC50=0.14 uM | | | | |
| Perfumery | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | |
| Pesticide | | | | |

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|-------------|-------|----|--------|----------------------------|----------------------------|
| N-UNDECANE | Shoot | -- | 600.0 | Jim Duke's personal files. | |
| NAPHTHALENE | Shoot | -- | 3500.0 | 1.41 | Jim Duke's personal files. |

Activities (1)

| | | | | |
|----------------|---|----|------|----------------------------|
| Cataractogenic | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry | | | |
| NARIRUTIN | Shoot | -- | 26.6 | Jim Duke's personal files. |

Activities (1)

| | | | | |
|-----------------------|--|--|--|--|
| Oviposition-Stimulant | Jeffery B. Harborne and H. Baxter, eds. 1983. Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants. Taylor & Frost, London. 791 pp. | | | |
|-----------------------|--|--|--|--|

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|---------------|-------|----|--------|------|---|
| NONANAL | Shoot | -- | 10.0 | 0.5 | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. <i>J. Ess. Oil Res.</i> 3:191-2. |
| OCT-1-EN-3-OL | Shoot | -- | 4800.0 | 2.24 | Jim Duke's personal files. |
| OCTAN-3-OL | Shoot | -- | 2800.0 | 1.0 | Jim Duke's personal files. |
| OCTAN-3-ONE | Shoot | -- | 300.0 | | Jim Duke's personal files. |

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|----------|-------|----|-----|------|---|
| P-CYMENE | Shoot | -- | 4.0 | -0.5 | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. <i>J. Ess. Oil Res.</i> 3:191-2. |
|----------|-------|----|-----|------|---|

Activities (16)

| | | | | |
|--------------------------|-------------------|--|--|--|
| Analgesic | Martindale's 28th | | | |
| Antiacetylcholinesterase | | | | |

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|----------------------------------|--|
| Antibacterial | |
| Antiflu | |
| Antirheumatalgic | Martindale's 28th |
| Antiviral | |
| FLavor FEMA 12-250 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungicide | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Herbicide IC50=50 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Insectifuge | Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin. |
| Irritant | Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. |
| Laxative | Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. |
| Pesticide | |
| Sedative | Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. |
| Trichomonicide LD100=50 ug/ml | |

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|-------------------------------------|-------|----|--------|-----|---|
| PARA-8-HYDROXY-MENTH-(4-5)-EN-3-ONE | Shoot | -- | 2500.0 | | Jim Duke's personal files. |
| PARA-CYMENE | Shoot | -- | 1800.0 | | Jim Duke's personal files. |
| PERILLALDEHYDE | Shoot | -- | 710.0 | 1.0 | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. <i>J. Ess. Oil Res.</i> 3:191-2. |

Activities (11)

| | |
|------------------------------------|---|
| Acaricide | |
| Antibacterial MIC=500->1,000 ug/ml | |
| Antimelanomic IC50=120 uM/l | |
| Antiproliferative | |
| Antiseptic | |
| Candidicide MIC=500 ug/ml | |
| Fungicide MIC=250-500 ug/ml | |
| Mutagenic | |
| Nematicide MLC=1 mg/ml | Shoyakugaku Zasshi, 44: 183. |
| Sedative | |
| Vibriocide 250 ug/ml | Blaschek, W., Hansel, R., Keller, K., Reichling, J., Rimpler, H., and Schneider, G. eds. 1998. Hager's Handbuch der Pharmazeutischen Praxis, Auflage Band 2 (A-K), 909 pp., (L-Z), 858 pp. Springer-Verlag, Berlin. |

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|--------------|-------|----|------|-------|---|
| PIPERITENONE | Shoot | -- | 45.0 | -0.45 | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. <i>J. Ess. Oil Res.</i> 3:191-2. |
|--------------|-------|----|------|-------|---|

Activities (3)

| | |
|---------------------------------------|---|
| Antiacylcholinesterase IC50=110 ug/ml | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Toxic 10,000/man | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |

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|------------|-------|----|--------|------|----------------------------|
| PIPERITONE | Shoot | -- | 1300.0 | 0.03 | Jim Duke's personal files. |
|------------|-------|----|--------|------|----------------------------|

Activities (7)

| | |
|----------------------|--|
| Antiasthmatic | |
| FLavor FEMA 1-2 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Herbicide IC50=30 mM | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Herbicide IC50=75 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Insectifuge (> DEET) | Bowers, W.S., Ortego, F., You, X., and Evans, P.H. Insect Repellents From The Chinese Prickly Ash <i>Zanthoxylum bungeanum</i> . <i>Journal of Natural Products</i> , 56(6): 935-938, 1993. |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |

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|----------|---------------|----|----------|-------|----------------------------|
| PULEGONE | Essential Oil | -- | 332200.0 | -0.25 | Jim Duke's personal files. |
|----------|---------------|----|----------|-------|----------------------------|

Activities (28)

| | |
|--------------------------|--|
| AChE-Inhibitor | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. |
| Antiacetvlcholinesterase | |

| | |
|--|--|
| Antiacetylcholinesterase IC50=136 ug/ml | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. |
| Antialzheimeran? | Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus <i>Bystropogon</i> *. <i>Planta Medica</i> , 57: 347, 1991. |
| Antibacterial | |
| Anticholinesterase | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. |
| Antihistaminic | Ortiz De Urbina, A.V., Martin, M.L., Montero, M.J., Carron, R., Sevilla, M.A., San Roman, L. 1989. Antihistaminic activity of pulegone on the guinea-pig ileum. <i>J. Pharm. Pharmacol.</i> 42: 295-296, 1990. |
| Antipyretic | |
| Avifuge | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus <i>Bystropogon</i> *. <i>Planta Medica</i> , 57: 347, 1991. |
| Cerebrotoxic orl man | J. Aromatherapy 4: 24. |
| Encephalopathic 80 mg/kg orl rat | Lawrence Review of Natural Products, Jan-92. |
| FLavor FEMA 5-30 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungicide | Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus <i>Bystropogon</i> *. <i>Planta Medica</i> , 57: 347, 1991. |
| Glutathionalytic | Lawrence Review of Natural Products, Jan-92. |
| Hallucinogenic | R.J. Hixtable (Huxtable, R.J. (as T. Max). 1992. This and That: The Essential Pharmacology of Herbs and Spices. Tips 13:15-20 Huxtable, R.J. 1992b. The Myth of Benficit Nature. The Risk of Herbal Preparations. <i>Anns. Intern. Med.</i> 117(2):165-6; Huxtable, R. |
| Hepatotoxic | Lewis, E.J. and Friedrich, E.C. 1989. The Essential Oil of Poliomintha incana. <i>Planta Medica</i> 56(2): 224-226, 1990. |
| Herbicide IC50=1.5 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Insecticide | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. |
| Insectifuge | |
| Nephrotoxic | R.J. Hixtable (Huxtable, R.J. (as T. Max). 1992. This and That: The Essential Pharmacology of Herbs and Spices. Tips 13:15-20 Huxtable, R.J. 1992b. The Myth of Benficit Nature. The Risk of Herbal Preparations. <i>Anns. Intern. Med.</i> 117(2):165-6; Huxtable, R. |
| Neurotoxic | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Pulifuge | |
| Pulmonotoxic | |
| Sedative | |

PULEGONE Shoot -- 690400.0 5.17 Jim Duke's personal files.

Activities (28)

| | |
|--|--|
| AChE-Inhibitor | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. |
| Antiacetylcholinesterase IC50=0.9 mM | |
| Antiacetylcholinesterase IC50=136 ug/ml | |
| Antialzheimeran? | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. |
| Antibacterial | Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus <i>Bystropogon</i> *. <i>Planta Medica</i> , 57: 347, 1991. |
| Anticholinesterase | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. |
| Antihistaminic | Ortiz De Urbina, A.V., Martin, M.L., Montero, M.J., Carron, R., Sevilla, M.A., San Roman, L. 1989. Antihistaminic activity of pulegone on the guinea-pig ileum. <i>J. Pharm. Pharmacol.</i> 42: 295-296, 1990. |
| Antipyretic | |
| Avifuge | |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus <i>Bystropogon</i> *. <i>Planta Medica</i> , 57: 347, 1991. |
| Cerebrotoxic orl man | J. Aromatherapy 4: 24. |
| Encephalopathic 80 mg/kg orl rat | Lawrence Review of Natural Products, Jan-92. |
| FLavor FEMA 5-30 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungicide | Economou, D., and Nahrstedt, A. 1991. Chemical, Physiological, and Toxicological Aspects of the Essential Oil of Some Species of the Genus <i>Bystropogon</i> *. <i>Planta Medica</i> , 57: 347, 1991. |
| Glutathionalytic | Lawrence Review of Natural Products, Jan-92. |
| Hallucinogenic | R.J. Hixtable (Huxtable, R.J. (as T. Max). 1992. This and That: The Essential Pharmacology of Herbs and Spices. Tips 13:15-20 Huxtable, R.J. 1992b. The Myth of Benficit Nature. The Risk of Herbal Preparations. <i>Anns. Intern. Med.</i> 117(2):165-6; Huxtable, R. |
| Hepatotoxic | Lewis, E.J. and Friedrich, E.C. 1989. The Essential Oil of Poliomintha incana. <i>Planta Medica</i> 56(2): 224-226, 1990. |
| Herbicide IC50=1.5 uM | Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp. |
| Insecticide | Grundy, D. L. and Still, C. C., Inhibition of acetylcholinesterases by pulegone-1,2-epoxide, <i>Oest. Biochem. & Physiol.</i> , 23, 1985, 383-8. |
| Insectifuge | |
| Nephrotoxic | R.J. Hixtable (Huxtable, R.J. (as T. Max). 1992. This and That: The Essential Pharmacology of Herbs and Spices. Tips 13:15-20 Huxtable, R.J. 1992b. The Myth of Benficit Nature. The Risk of Herbal Preparations. <i>Anns. Intern. Med.</i> 117(2):165-6; Huxtable, R. |
| Neurotoxic | |
| Perfumery | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Pulifuge | |
| Pulmonotoxic | |
| Sedative | |

Activities (176)

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|--|---|
| 11B-HSD-Inhibitor | |
| 5-Lipoxygenase-Inhibitor IC50 (uM)=4 | |
| ATPase-Inhibitor | Nigg, H.N. and Seigler, D.S., eds. 1992. <i>Phytochemical Resources for Medicine and Agriculture</i> . Plenum Press, New York. 445 pp. |
| Aldehyde-Oxidase-Inhibitor IC70-96=10 uM | |
| Aldose-Reductase-Inhibitor 100 uM | |
| Aldose-Reductase-Inhibitor 4 ug/ml | Ichikawa, K., et al. 1991. Isolation and Structure Determination of Aldose Reductase Inhibitors from Traditional Thai Medicine, and Syntheses of Their Derivatives. <i>Sankyo Kenkyusho Nempo</i> , 43: 99-110. |
| Aldose-Reductase-Inhibitor IC50=0.84 ug/ml cow | Okada,Y,et al.1995. Search for Naturally Occurring Substances to Prevent the Complications of Diabetes.II.Inhibitory Effect of Coumarin and Flavonoid Derivatives on Bovine Lens Aldose Reductase and Rabbit Platelet Aggregation. <i>Chem Pharm Bull</i> 43(8):1385-1387 |
| Aldose-Reductase-Inhibitor IC50=0.344 uM | Mao, X. M., Zhang, J. Q. 1993. Inhibition of Aldose Reductase by Extracts of Chinese Herbal Medicine. <i>Zhongguo Zhongyao Zazhi</i> , 18(10): 623-624. |
| Allelochemical IC82=1 mM | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Allergenic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Analgesic | |
| AntiCrohn's 400 mg/man/3x/day | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| AntiGTF ID50=120 ug/ml | |
| AntiHIV | |
| AntiPMS 500 mg/2x/day/wmn | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiaflatoxin IC50=25 uM | |
| Antiaflatoxin IC50=7.5 ppm | |
| Antiaggregant IC50=55 uM | Economic & Medicinal Plant Research, 5: 333. |
| Antiaggregant 30 uM | |
| Antiaging | |
| Antiallergic IC50=14 uM | Jim Duke's personal files. |
| Antialzheimeran | |
| Antianaphylactic | Meli, R., Autore, G., Di Carlo, G., Capasso, F. Inhibitory Action of Quercetin on Intestinal Transit in Mice. <i>Phytotherapy Research</i> 4(5): 201, 1990. |
| Antiangiogenic | |
| Antiarthritic | |
| Antiasthmatic IC50=14 uM | |
| Antiatherosclerotic | |
| Antibacterial | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Anticarcinomic (Breast) IC50=1.5 uM | Medline (post 1990 searches filed in my computer) |
| Anticariogenic ID50=120 ug/ml | |
| Anticataract | |
| Anticolic 400 mg/man/3x/day | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Anticomplementary | |
| Anticystitic 1,000 mg/day/4 weeks | |
| Antidepressant | |
| Antidermatitic | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antidiabetic | |
| Antielastase IC50=0.8 ug/ml | |
| Antiecephalitic | Economic & Medicinal Plant Research, 5: 199. |
| Antiescherichic | |
| Antiestrogenic | |
| Antifeedant IC52=<1,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Antifibrosarcomic | |
| Antiflu | Vlietinck, A.J. and Domisse, R.A. eds. 1985. <i>Advances in Medicinal Plant Research</i> . Wiss. Verlag. Stuttgart. |
| Antigastric | Rastilel'nye Resursy, 21: 85. |
| Antigonadotropic | Jeffery B. Harborne and H. Baxter, eds. 1983. <i>Phytochemical Dictionary. A Handbook of Bioactive Compounds from Plants</i> . Taylor & Frost, London. 791 pp. |
| Antihepatotoxic | Joyeux, M., Rolland, A., Fleurentin, J., Mortier, F., and Dorfman, P. 1989. Tert-Butyl Hydroperoxide-Induced Injury in Isolated Rat Hepatocytes: A Model for Studying Anti-Hepatotoxic Crude Drugs. <i>Planta Medica</i> 56(2): 171-173, 1990. |
| Antiherpetic 48-150 ug/ml | |
| Antihistaminic IC50=<10 uM | |
| Antihydrophobic | Vlietinck, A.J. and Domisse, R.A. eds. 1985. <i>Advances in Medicinal Plant Research</i> . Wiss. Verlag. Stuttgart. |

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|------------------------------------|--|
| Antiinflammatory 20-150 mg/kg | Fitoterapia No.5-1990. |
| Antileishmanic IC50=64 | |
| Antileukemic IC50=10 uM | Economic & Medicinal Plant Research, 5: 225. |
| Antileukemic IC50=>10 ug/ml | Life Sciences 55: 1061. |
| Antileukemic 5.5-60 uM | |
| Antileukotriene | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antilipoperoxidant IC67=50 | |
| Antimalarial IC50=1-6.4 ug/ml | Medicinal and Poisonous Plants of the Tropics. Leeuwenberg, A.J.M., ed. Pudoc, Wageningen. 1987. |
| Antimelanomic | |
| Antimetastatic | |
| Antimutagenic ID50=2-5 nM | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antimutagenic ID50=0.62 ug/ml | |
| Antimyocarditic | Economic & Medicinal Plant Research, 5: 199. |
| Antinitrosaminic | |
| Antinociceptive | |
| Antioxidant IC96=300 ppm | Phenolic Compounds in Food and Their Effects on Health. Antioxidants & Cancer Prevention. Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Antioxidant ED50=2.3 uM | Seidel, V., Verholle, M., Malard, Y., Tillequin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from Ballota nigra L. Inhibit in vitro LDL Peroxidation. Phytotherapy Research, 14(2): 93-98. |
| Antioxidant 4.7 x Vit. E | |
| Antioxidant IC47=10 uM | |
| Antipancreatic | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY. |
| Antiperiodontal | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiperistaltic | |
| Antipermeability | |
| Antiperoxidant | Planta Medica, 57: A110, 1991. |
| Antipharyngitic | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiplaque | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiplasmodial IC50=13-64 | |
| Antipodriac | |
| Antipolio | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiproliferant 10 nM | |
| Antiprostanoid | |
| Antiprostatic | Joseph, J., Nadeau, D. and Underwood, A. 2001. The Color Code. Hyperion, NY. |
| Antipsoriac | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiradicular IC50=4.6 uM | Planta Medica, 56(6): 695, 1990. |
| Antispasmodic | |
| Antistreptococcic ID50=120 ug/ml | |
| Antithiamin | Phenolic Compounds in Food and Their Effects on Health, 69. |
| Antithrombic | |
| Antitrypanosomic IC50=13 | |
| Antitumor 10 uM | |
| Antitumor (Bladder) | |
| Antitumor (Breast) | |
| Antitumor (Colon) | |
| Antitumor (Lung) | |
| Antitumor (Ovary) | |
| Antitumor (Skin) 20 uM | |
| Antitumor-Promoter | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Antiulcer | |
| Antiviral IC50=10 uM | Economic & Medicinal Plant Research, 5: 225. |
| Antiviral 48-150 ug/ml | Amoros, M., Simoes, C.M.O., Girre, L., et al. Synergistic Effect Of Flavones And Flavonols Against Herpes Simplex Virus Type 1 In Cell Culture. Comparison With The Antiviral Activity Of Propolis. J. of Natural Products 55(12):1732-1740, 1992. |
| Apoptotic 20-60 uM | |
| Bacteristat 10 mg/ml | |
| Bradycardiac | Huang, K. C. 1993. The Pharmacology of Chinese Herbs. CRC Press, Boca Raton, FL 388 pp. |
| COMT-Inhibitor | |
| COX-2-Inhibitor <40 uM | |
| Calmodulin-Antagonist | Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Cancer-Preventive | Stitt, P. A. Why George Should Eat Broccoli. Dougherty Co, Milwaukee, WI, 1990, 399 pp. |
| Candidicide | |
| Capillaroprotective | Merck 11th Edition |
| Carcinogenic 40,000 ppm (diet) mus | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |

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| Copper-Chelator | |
| Cyclooxygenase-Inhibitor | |
| Cytochrome-P450-1A2-Inhibitor | |
| Cytotoxic ED50=70 ug/ml | Matsukawa, Y., et al. The Effect of Quercetin and Other Flavonoids on Cell Cycle Progression and Growth of Human Gastric Cancer Cells. <i>Planta Medica</i> , 56(6): 677, 1990. |
| Cytotoxic IC82=100 ug/ml | <i>Planta Medica</i> , 57: A113, 1991. |
| Deiodinase-Inhibitor | Jim Duke's personal files. |
| Diaphoretic? | Lawrence Review of Natural Products, Dec-90. |
| Differentiator 5.5 uM | |
| Estrogenic 10% genistein | |
| Fungicide | |
| Glucosyl-Transferase-Inhibitor ID50=120 ug/ml | |
| HIV-RT-Inhibitor IC50=<1 ug/ml | Nakane, H., Fukushima, M., and Ono*, K. Differential Inhibition Of Reverse Transcriptase And Various DNA Polymerases By Digallic Acid And Its Derivatives. <i>Journal of Natural Products</i> , 53(5): 1234-1240, 1990. |
| Hemostat | Huang, K. C. 1993. <i>The Pharmacology of Chinese Herbs</i> . CRC Press, Boca Raton, FL 388 pp. |
| Hepatomagenic 5,000 ppm (diet) rat | Phenolic Compounds in Food and Their Effects on Health. <i>Antioxidants & Cancer Prevention</i> . Huang, M.T., Ho, C.T. and Lee, C.Y. eds. 1992. ACS Symposium Series 507.ACS, Washington 402 pp. |
| Hepatoprotective | |
| Hypoglycemic 100 mg/kg orl rat | Ivorra, M.D., Paya, M., and Villar, A. 1989. A Review of Natural Products and Plants as Potential Antidiabetic Drugs. <i>Journal of Ethnopharmacology</i> , 27: 243-275, 1989. |
| Inotropic | |
| Insulinogenic | Pizzorno, J.E. and Murray, M.T. 1985. <i>A Textbook of Natural Medicine</i> . John Bastyr College Publications, Seattle, Washington (Looseleaf). |
| Juvabional | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Larvistat 8,000 ppm diet | Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, <i>Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology</i> , v. 4, Oryx Press, Phoenix, 1989, 267pp. |
| Lipoxygenase-Inhibitor IC11=>1.25 mM | Oszmianski, J. and Lee, C.Y. 1990. Inhibitory Effect of Phenolics on Carotene Bleaching in Vegetables. <i>J. Agric. Food Chem.</i> 38: 688-690. |
| Lipoxygenase-Inhibitor IC50=0.1-5 uM | |
| MAO-A-Inhibitor | |
| MMP-9-Inhibitor 20 uM | |
| Mast-Cell-Stabilizer | |
| Metal-Chelator (Copper) | Seidel, V., Verholle, M., Malard, Y., Tillequin, F., Fruchart, J-C., Duriez, P., Bailleul, F., Teissier, E. 2000. Phenylpropanoids from <i>Ballota nigra</i> L. Inhibit in vitro LDL Peroxidation. <i>Phytotherapy Research</i> , 14(2): 93-98. |
| Metalloproteinase-Inhibitor IC50=>42 uM | |
| Mutagenic | |
| NADH-Oxidase-Inhibitor | |
| NEP-Inhibitor IC50=>42 uM | |
| NF-kB-Inhibitor | |
| NO-Inhibitor IC>50=125 uM | |
| NO-Inhibitor IC50=20 uM | |
| NO-Synthase-Inhibitor 5-50 uM | |
| Neuroprotective 5-25 uM | |
| Ornithine-Decarboxylase-Inhibitor <10 uM | |
| P450-Inducer 5 uM | Father Nature's Farmacy: The aggregate of all these three-letter citations. |
| P450-Inhibitor 50-100 uM | Father Nature's Farmacy: The aggregate of all these three-letter citations. |
| PGE2-Inhibitor | |
| PTK-Inhibitor 0.4-24 uM | |
| Pesticide | |
| Phospholipase-Inhibitor | |
| Plasmodicide | Neuwinger, H. D. 1996. <i>African Ethnobotany - Poisons and Drugs</i> . Chapman & Hall, New York. 941 pp. |
| Proliferant | |
| Prostaglandin-Synthesis-Inhibitor 40 ug/ml | Ibewuike, J. C., Ogungbamila, F. O., Ogundaini, A. O., Okeke, I. N., Bohlin, L. 1997. Antiinflammatory and Antibacterial Activities of C-methylflavonol from <i>Piliostigma thonningii</i> . <i>Phytotherapy Research</i> , 11(4): 281-284. |
| Protein-Kinase-C-Inhibitor | Naim, M., Zehavi, U., Nagy, S., and Rouseff, R.L. Hydroxycinnamic Acids as Off-Flavor Precursors in Citrus Fruits and Their Products. <i>Phenolic Compounds in Food and Their Effects on Health</i> , Ch.14. |
| Quinone-Reductase-Inducer 6 uM | Uda, Y., Price, K. R., Williamson, G., Rhodes, M. J. C. 1997. Induction of the Anticarcinogenic Marker Enzyme, Quinone Reductase, in Murine Hepatoma Cells In Vitro by Flavonoids. <i>Cancer Lett.</i> , 120 (2): 213-216. |
| Quinone-Reductase-Inducer 13 uM | |
| TNF-alpha-Inhibitor IC50=3.11 uM | |
| Teratologic | |
| Topoisomerase-I-Inhibitor IC50=12.8 ug/ml | |
| Topoisomerase-I-Inhibitor IC50=42 uM | |
| Topoisomerase-II-Inhibitor IC50=1-6.9 ug/ml | |

inhibitor IC₅₀=23-40 uM

Tumorigenic 0.1% diet orl Jim Duke's personal files.
rat/yr

Tyrosinase-Inhibitor
ID₅₀=70 uM

Tyrosine-Kinase-Inhibitor Economic & Medicinal Plant Research, 6: 170.

VEGF-Inhibitor

Vasodilator

Xanthine-Oxidase-Inhibitor IC₅₀=>0.4 ug/ml Chem. & Pharm. Bull. 38: 1772.

Xanthine-Oxidase-Inhibitor IC₅₀=10.6 ug/ml

Xanthine-Oxidase-Inhibitor 3.1 uM

cAMP-Phosphodiesterase-Inhibitor Pizzorno, J.E. and Murray, M.T. 1985. A Textbook of Natural Medicine. John Bastyr College Publications, Seattle, Washington (Looseleaf).

iNOS-Inhibitor IC₅₀=20 uM

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|----------|-------|----|------|-------|--|
| SABINENE | Shoot | -- | 20.0 | -0.27 | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. J. Ess. Oil Res. 3:191-2. |
|----------|-------|----|------|-------|--|

Activities (5)

Antibacterial

Antihelicobacter

Antiseptic

Antiulcer

Perfumery

Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry

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|---------------|-------|----|--------|------|----------------------------|
| TERPINEN-4-OL | Shoot | -- | 1400.0 | 0.41 | Jim Duke's personal files. |
|---------------|-------|----|--------|------|----------------------------|

Activities (23)

Allelopathic Wright,C.W.(Ed)2002.Medicinal&Aromatic Plants-Industrial Profiles.Artemisia.344pp.Maffei,M.(Ed)2002.Vetiveria.The Genus Vetiveria.Taylor&Francis.NY, NY,191pp.Southwell,I.,Lowe,R.(Eds)1999.Tea Tree.The Genus Melaleuca.Harwood Acad.Pub.Amsterdam,Netherlands.

Antiacetylcholinesterase IC₂₁₋₂₄=1.2 mM

Antiacne

Antiallergic

Antiasthmatic Chin. J. Tuber. Respir. Dis., 4:203, 1982.

Antibacterial

Antioxidant

Antiseptic

Flav. & Frag. J. 9: 129.

Antispasmodic

Antitussive Chin. J. Tuber. Respir. Dis.

Antiulcer

Bacteriostatic Chin. J. Tuber. Respir. Dis.

Diuretic 0.1 ml/rat

Fungicide

Herbicide IC₅₀=200 mM Lydon, J. & Duke, S., The potential of pesticides from plants, pp. 1-41 in Craker, L. & Simon, J., eds, Herbs, Spices & Medicinal Plants: Recent Advances in Botany, Horticulture, & Pharmacology, v. 4, Oryx Press, Phoenix, 1989, 267pp.

Herbicide IC₅₀=22 uM Keeler, R.F. and Tu, A.T. eds. 1991. Toxicology of Plant and Fungal Compounds. (Handbook of Natural Toxins Vol. 6) Marcel Dekker, Inc. NY. 665 pp.

Insectifuge

Irritant Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.

Nematicide MLC=1 mg/ml Shoyakugaku Zasshi, 44: 183.

Pesticide

Renoirritant Newall, C. A., Anderson, L. A. and Phillipson, J. D. 1996. Herbal Medicine - A Guide for Health-care Professionals. The Pharmaceutical Press, London. 296pp.

Spermicide ED₁₀₀=0.015

Vulnerary Lawrence Review of Natural Products, Jan-91.

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|----------------------------|-------|----|--------|--|----------------------------|
| TETRAHYDRO-BETA-BOURBONENE | Shoot | -- | 1100.0 | | Jim Duke's personal files. |
|----------------------------|-------|----|--------|--|----------------------------|

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|--------|-------|----|-----|-------|--|
| THYMOL | Shoot | -- | 5.0 | -0.33 | Tumen, G. 1991. The Volatile Constituents of <i>Acinos suaveolens</i> (Sibt. et Smith). G. Don fil. Growing in Turkey. J. Ess. Oil Res. 3:191-2. |
|--------|-------|----|-----|-------|--|

Activities (71)

Acaricide

Allergenic

Analgesic Madaus, G. 1976. Lehrbuch der Biologischen Hilfsmittel. Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus.

Ancylostomicide Madaus, G. 1976. Lehrbuch der Biologischen Hilfsmittel. Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus.

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| | Madaus. |
| Ankylostomacide | Madaus, G. 1976. Lehrbuch der Biologischen Hilfsmittel. Vol., 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. |
| Anthelmintic | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antiacne | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Antiaggregant IC50=0.75 | Tramil, 42: 511. |
| Antialzheimeran? | L. Gracza (1985) as cited by Buchbauer re antiacetylcholinesterase. |
| Antiarthritic | Madaus, G. 1976. Lehrbuch der Biologischen Hilfsmittel. Vol., 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. |
| Antiatherosclerotic IC50=4 uM | |
| Antibacterial MIC=50-400 ug/ml | |
| Antibronchitic | Madaus, G. 1976. Lehrbuch der Biologischen Hilfsmittel. Vol., 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. |
| Anticariogenic MIC=200- 400 ug/ml | |
| Anticholinesterase | L. Gracza (1985) as cited by Buchbauer re antiacetylcholinesterase. |
| Antihalitosis | American Health, 12(4): 17, 1993. |
| Antiherpetic | Martindale's 28th |
| Antiinflammatory (=indomethacin) | |
| Antilepric | Madaus, G. 1976. Lehrbuch der Biologischen Hilfsmittel. Vol., 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. |
| Antimelanomic IC50=120 uM/l | |
| Antineuritic | |
| Antioxidant 100 ppm | Martindale's 28th |
| Antioxidant (LDL) IC50=4 uM | |
| Antiperiodontic MIC=50- 200 ug/ml | |
| Antiplaque MIC=39-625 ug/ml | Osawa, K., Matsumoto, T., Maruyama, T., Takiguchi, T., Okuda, K., and Takazoe, I., Studies of the antibacterial activity of plant extracts and their constituents against periodontopathic bacteria, Bull Tokyo Dent. Coll., 31 (1), 1990, 17-21 |
| Antiradicular EC=60 | Jimenez, J., Navarro, M.C., Montilla, M.P., Martin, A. and Martinez, A. 1993. Thymus zygis Oil: Its Effects on CCl4-Induced Hepatotoxicity and Free Radical Scavenger Activity. JEOP: 153-8. |
| Antirheumatic | Williamson, E. M. and Evans, F. J., Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Antisalmonella | |
| Antiseptic 20 x phenol | Wagner & Wolff, eds. 1977. New Natural Products (RS164. I56. 176) |
| Antispasmodic | |
| Antistaphylococcic | |
| Antistreptococcic MIC=200-400 ug/ml | |
| Antitrichinosic 5% | Madaus, G. 1976. Lehrbuch der Biologischen Hilfsmittel. Vol., 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. |
| Antitussive | Iwu, M.M. 1993. Handbook of African Medicinal Plants. CRC Press, Boca Raton, FL 435 pp. |
| Ataxigenic | Zebowitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. |
| Candidicide 100 ug/ml (>Nystatin) | |
| Carminative | Yamamoto, A., Umemori, S., and Muranishi, S. 1993. Absorption Enhancement of Intrapulmonary Administered Insulin by Various Absorption Enhancers and Protease Inhibitors in Rats. J. Pharm. Pharmacol. 46: 14-18, 1994. |
| Counterirritant | Nigg, H.N. and Seigler, D.S., eds. 1992. Phytochemical Resources for Medicine and Agriculture. Plenum Press, New York. 445 pp. |
| Culicide LC50=36-49 mg/l | |
| Cyclooxygenase-Inhibitor (=indomethacin) | |
| Dentifrice | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Deodorant | Martindale's 28th |
| Dermatitogenic | |
| Enterorelaxant | J. Aromatherapy 4: 22. |
| Enterotoxic | Wichtl, M. 1984. Teedrogen. Ein Handbuch fur Apotheker und Arzte. Wissenschaftliche Verlagsgesellschaft. mbH Stuttgart. 393 pp. |
| Expectorant | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| FLavor FEMA 2-100 | Aloe Research Council - Duke writeup of non-peer reviewd book by Coats and draft by Henry |
| Fungicide | Merck 11th Edition |
| Gastroirritant | Martindale's 29th |
| Gram(+)icide MIC=200- 400 ug/ml | |
| Gram(-)icide MIC=50-200 ug/ml | |
| Insecticide LC50=36-49 mg/l | |
| Insecticide 0.22 uM/fly | |
| Insectifuge | |
| Irritant | Leung, A. Y. and Foster, S. 1995. Encyclopedia of Common Natural Ingredients 2nd Ed. John Wiley & Sons, New York. 649 pp. |
| Larvicide 10 ppm | Berenbaum, M. R., The natives knew, Chemtech, (May), 1990, 275-279. |
| Larvicide 58 ppm | |
| Larvicide LC50=36-49 | |

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| Molluscicide | |
| Myorelaxant | J. Aromatherapy 4: 22. |
| Nematicide MLC=0.1 mg/ml | Shoyakugaku Zasshi, 44: 183. |
| Perfumery | Aloe Research Council - Duke write up of non-peer reviewd book by Coats and draft by Henry |
| Pesticide | |
| Sedative | Zebovitz, T. C. Ed. 1989. Part VII. Flavor and Fragrance Substances, in Keith L. H. and Walters, D.B., eds. Compendium of Safety Data Sheets for Research and Industrial Chemicals. VCH Publishers, New York. 3560-4253. |
| Sprout-Inhibitor | Duke, J.A.. Personal Communication. |
| Tracheorelaxant | |
| Trichomonicide LD100=25 ug/ml | |
| Urinary-Antiseptic | Williamson, E. M. and Evans, F. J. Potter's New Cyclopaedia of Botanical Drugs and Preparations, Revised Ed., Saffron Walden, the C. W. Daniel Co., Ltd., Essex UK, 362 pp, 1988, reprint 1989. |
| Varroacide | |
| Vermicide | Madaus, G. 1976. Lehrbuch der Biologischen Hilfsmittel. Vol. 1-3. 2862 pp. (+ 144 p. index). Georg Olms Verlag, Hildesheim. Reprint of 1938 Madaus. |